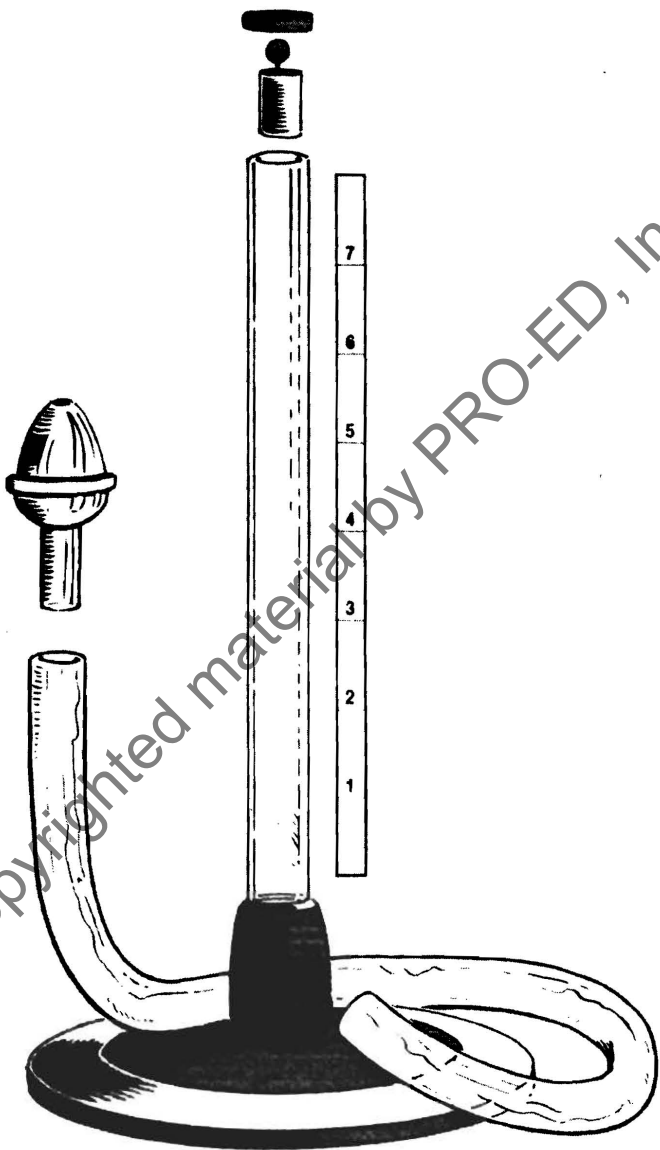


**SEE-SCAPE**  
*visual feedback  
of nasal  
emission*





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## **Assembly**

1. Insert rigid tube into black rubber base at a 90° angle to the table.
2. Drop foam float into rigid plastic tube and insert black rubber cap.
3. Insert nasal tip into flexible tubing as shown in illustration.
4. Attach flexible tubing to metal nipple at side of base.
5. Apply the gauged sticker to the side of the rigid plastic tube after the **See-Scape** is assembled.

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## **Directions for Use**

Gently insert the nasal tip into one of the client's nares so that air does not escape around the outside perimeter of the nasal tip. It is not necessary to occlude the other naris. To determine if the mechanism is working correctly, instruct the client to prolong the /m/ phoneme. The float should move *freely* within the rigid plastic tube and should remain suspended for the duration of the client's phonation. Upon cessation of phonation the float should drop freely to the bottom of the tube.

If the float does not move freely in response to phonation of /m/, the following may be checked:

1. occlusion of the client's nares
2. the angle of the rigid tube to the table
3. the complete occlusion of the nares by the nasal tip
4. moisture in rigid tube
5. any occlusion in any part of the mechanism
6. fold or crimp in flexible tubing

**NOTE:** Please refer to your facility's guidelines for recommended methods for cleaning and sterilization. The nasal tip and flexible tubing are to be used once and then disposed. Two sets are included with the kit. A package of six additional sets of nasal tip foam floats and flexible tubing are available from PRO-ED (Order Number 2167).

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## ***Introduction to See-Scape***

The **See-Scape** is a mechanism designed to detect that nasal emission of air during speech and to provide instant visual feedback to both the client and the clinician.

If air is introduced into the nasal tip, it will cause the air mass in the tubes of the **See-Scape** to exert pressure against the float, causing it to rise in the rigid plastic tube. If the client is emitting air nasally, it should be instantly apparent by the action of the float in the rigid plastic tube.

## ***Description***

The base of the **See-Scape** has been constructed to operate efficiently on a table or desk so that it is easily viewed by both the client and the clinician. Two plastic nasal tips have been included with the **See-Scape**. The flexible tubing is strong to avoid crimping and is of a sufficient length to provide adequate distance between the client and the mechanism. The rigid plastic tube is long enough to give visual feedback about the variations of intensity of nasal emission. The clinician may wish to apply the gauged sticker to the rigid plastic tube for more exact measurement.

The float is made of a lightweight material and is extremely sensitive to any movement of air in the tube. The cap prevents the float from escaping from the tube but allows for free movement of air.

The **See-Scape** has been designed so that it can easily be dismantled and stored in its container.

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## ***Use of See-Scape in Diagnosis and Treatment***

A multitude of techniques to detect nasal emission can be found in the literature, ranging from the use of feathers positioned near the nares to expensive electronic devices that emit auditory signals. Many techniques (except the most expensive) are either inaccurate or require subjective judgments on the part of the clinician.

The **See-Scape** is an instant monitoring device that provides an *objective* assessment of nasal emission during speech. Because of its relative availability in terms of cost and its compactness, it can be easily used by speech–language pathologists in any setting and by their clients at home.

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## **Diagnosis**

The **See-Scape** is intended to be used as a tool in both diagnosis and treatment. The **See-Scape** gives an indication of air flow pressure rather than nasality, but in so doing, indicates a lack of velopharyngeal competence, which is perceived as hypernasality. If the speech-language pathologist has gauged the rigid plastic tube, the **See-Scape** can be used to measure the intensity of air flow pressure.

The general procedure that is recommended for testing is as follows:

1. **Word Level:** Using a standardized articulation inventory and omitting all words with /m/, /n/, and /ŋ/, determine which words cause air flow pressure to displace the float in the **See-Scape**.
2. **Phoneme Level:** Have the client repeat phonemes in isolation that were contained in words previously tested and found to be nasalized. Determine which phonemes cause displacement of the float.
3. **Sentence Level:** Have the client repeat short sentences that contain no /m/, /n/, and /ŋ/ phonemes and mark those sounds that cause air flow to displace the float in the **See-Scape**.

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## **Treatment**

Because the **See-Scape** provides instant visual feedback of nasal emission during treatment, it eliminates the necessity for lengthy explanations of the problem to the client.

Through such visual feedback, the client is able to modify his or her speech sound discrimination and improve velopharyngeal competence. The treatment of nasal emission must focus on articulation. The resonance disorder will decrease as articulatory proficiency increases. Therefore, the suggested approach to treatment of nasal emission using the **See-Scape** is as follows:

1. Select the constant phoneme that is most easily elicited.
2. Pair the consonant phoneme with vowels, beginning with low back vowels and moving toward high front vowels, in CV combinations.
3. Use any good articulation program, omitting words with /m/, /n/, and /ŋ/.



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